

Work Order ID 65209

January 10, 2011 7:40:52 AM



Page 1

Item ID: D3649-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Tunnel Bottom Panel Assembly

Start Date: 1/10/11 Start Qty: 1.00



Cust Item ID:

Required Date: 1/21/11 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan: CL

Date: 1/10/11

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #
Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3649

Rev B

100

0.00



FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D3649 ☐ Dwg Rev: B ☐ Prog Rev: B ☐ 2-
Debur if necessary

304 .018

1B11-1-11

①

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

1B11-1-11

120

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

8.40/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 65209

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Page 2

Item ID: D3649-041

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Item Name: Tunnel Bottom Panel Assembly

Start Date: 1/10/11 Start Qty: 1.00



Cust Item ID:

Required Date: 1/21/11 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130



Brake NC

Brake NC

NC BRAKE

Memo

Form as per Dwg D3649

0.00

0.00

So. 1/6/2/15

⑦

140



QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

0.00

8.1/02/15

⑩

150



Small Fab

Small Fab

Small Fab

Memo

1- Form dimple for MS20427M3 rivet per dwg D3649□*****ensure dimples are on the proper side*****□2-Assemble nutplates as per dwg D3649

0.00

0.00

8.5/02/15 ⑩

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 65209

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Page 3

Item ID: D3649-041

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Setup Start



Revision ID:

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Item Name: Tunnel Bottom Panel Assembly

Start Date: 1/10/11 Start Qty: 1.00



Cust Item ID:

Required Date: 1/21/11 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8/10/2/15



170

Identify as per dwg & Stock Location 190

0.00



Packaging

Memo

0.00

Packaging

11/2/10 sl 10

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/02/17

11-02-17
①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January 10, 2011 7:40:52 AM

Page 1

Work Order ID: 65209

Parent Item: D3649-041

Parent Item Name: Tunnel Bottom Panel Assembly





Start Date: 1/10/11

Required Date: 1/21/11

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A New Issue 07-09-26 EC verified by: DD
IPP Rev:B ECN 1113P 08-01-22 DD verified by: EC
IPP Rev:C Ecn1162 08-04-02 DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MS20427M3-3  Rivet		Purchased	No			110	Each	1,496.000	88	88			
<div> <div>Location</div> <div>ST318</div> <div>115409</div> <div>115589</div> </div> <div> <div>Loc Qty</div> <div>1496</div> <div>4</div> <div>1492</div> </div> <div> <div>Loc Code</div> <div></div> <div></div> <div></div> </div>													
M304S26GA  304/316 0.018 SHEET		Purchased	No			150	sf	116.0600	6.069	6.388421			
<div> <div>Location</div> <div>MAT20</div> <div>109398</div> <div>112885</div> </div> <div> <div>Loc Qty</div> <div>116.06</div> <div>20.06</div> <div>96</div> </div> <div> <div>Loc Code</div> <div></div> <div></div> <div></div> </div>													
MS21060-3K  Nut Plate		Purchased	No			150	Each	76.0000	22	22			
<div> <div>Location</div> <div>ST302</div> <div>109590</div> </div> <div> <div>Loc Qty</div> <div>76</div> <div>76</div> </div> <div> <div>Loc Code</div> <div></div> <div></div> </div>													
MS21062-3K  Nut Plate		Purchased	No			150	Each	216.0000	22	22			
<div> <div>Location</div> <div>ST302</div> <div>109590</div> </div> <div> <div>Loc Qty</div> <div>216</div> <div>216</div> </div> <div> <div>Loc Code</div> <div></div> <div></div> </div>													

Handwritten: 88 1/10/11/02/15

Handwritten: 88 6.388421 11-1-11

Handwritten: 112885 22 1/10/11/02/15

Handwritten: 22 22 1/10/11/02/15

Handwritten: 22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	65209
Description: Tunnel Bottom Panel		Part Number:	D3649-1
Inspection Dwg: D3649	Rev: B	Page 1 of 2	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.098	+0.004/-0.001	.102	X		✓ HB02	
Ø0.196	+0.005/-0.001	.198	X		✓	
Ø0.250	+0.005/-0.001	.252	X		✓	
0.400	+/-0.010	.401	-		✓	
0.385	+/-0.010	.388	X		✓	
0.250	+/-0.010	.250	X		✓	
44.57	+/-0.030	44.57	✓		T HB01	
11.70	+/-0.030	11.70	✓		T	
3.370	+/-0.030	3.370	✓		T	
13.76	+/-0.030	13.76	X		T	
4.300	+/-0.010	4.300	X		T	
10.11	+/-0.030	10.11	X		T	
12.90	+/-0.030	12.901	X		T	
16.61	+/-0.030	16.61	X		T	
15.80	+/-0.030	15.80	X		T	
3.950	+/-0.010	3.950	X		✓	
0.42	+/-0.030	.42	X		✓	
0.41	+/-0.030	.41	X		✓	
0.85	+/-0.030	.85	X		✓	
19.64	+/-0.030	19.64	✓		T	
0.54	+/-0.030	.54	✓		✓	
1.400	+/-0.010	1.400	✓		✓	
2.63	+/-0.030	2.63	✓		✓	
2.93	+/-0.030	2.93	X		✓	
1.49	+/-0.030	1.49	X		✓	
5.98	+/-0.030	5.98	X		✓	
0.54	+/-0.030	.54	X		✓	
2.20	+/-0.030	2.20	✓		✓	
2.75	+/-0.030	2.75	✓		✓	
2.48	+/-0.030	2.48	✓		✓	

DART AEROSPACE LTD		Work Order:	65209
Description: Tunnel Bottom Panel		Part Number:	D3649-1
Inspection Dwg: D3649	Rev: B	Page 2 of 2	

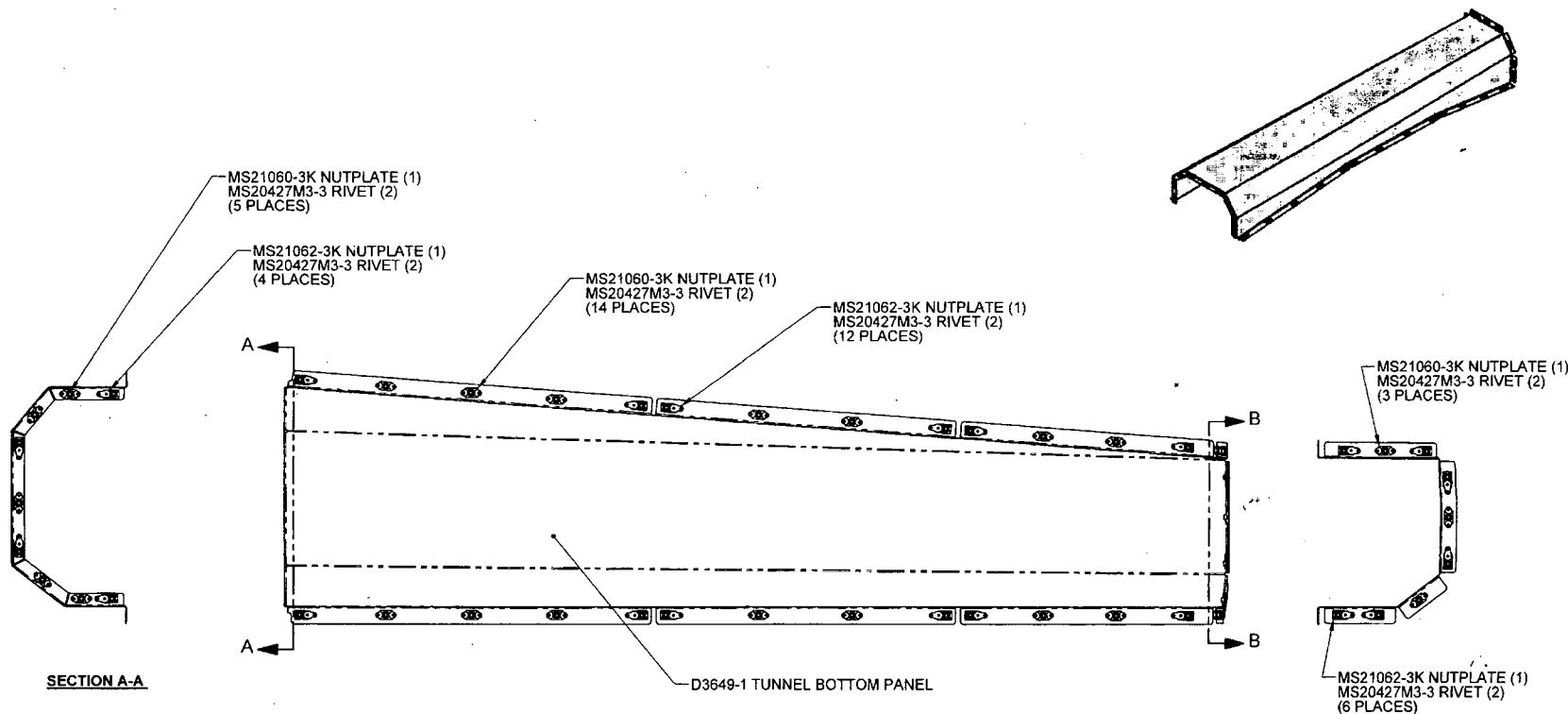
FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.16	+/-0.030	1.16	✓		✓	
3.38	+/-0.030	3.38	✓		✓	
2.00	+/-0.030	2.00	✓		✓	
0.90	+/-0.030	.90	✓		✓	
16.64	+/-0.030	16.64	✓		✓	
0.48	+/-0.030	.48	✓		✓	
13.80	+/-0.030	13.80	✓		✓	
0.46	+/-0.030	.46	✓		✓	
11.76	+/-0.030	11.76	✓		✓	
1.23	+/-0.030	1.23	✓		✓	
0.88	+/-0.030	.88	✓		✓	
18.46	+/-0.030	18.46	✓		✓	
5.23	+/-0.030	5.23	✓		✓	
1.932	+/-0.010	1.932	✓		✓	
1.943	+/-0.010	1.943	✓		✓	
5.02	+/-0.030	5.02	✓		✓	
1.820	+/-0.010	1.820	✓		✓	
0.70	+/-0.030	.70	✓		✓	
2.100	+/-0.010	2.100	✓		✓	
2.33	+/-0.030	2.33	✓		✓	
0.94	+/-0.030	.94	✓		✓	
3.30	+/-0.030	3.30	✓		✓	
1.900	+/-0.010	1.900	✓		✓	
0.61	+/-0.030	.61	✓		✓	

Measured by: RB	Audited by: S	Prototype Approval:	N/A
Date: 11-1-11	Date: 11/1/11	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	08.04.17	New Issue	KJ/DD	DD



D3649-041 BOTTOM PANEL ASSEMBLY

PART LIST

QTY -041	PART NUMBER	DESCRIPTION
X	D3649-041	TUNNEL BOTTOM PANEL ASSY.
1	D3649-1	TUNNEL BOTTOM PANEL
88	MS20427M3-3	RIVET
22	MS21060-3K	NUTPLATE
22	MS21062-3K	NUTPLATE

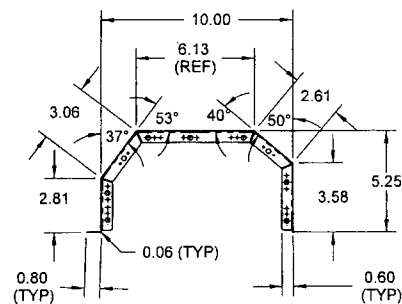
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RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 65209

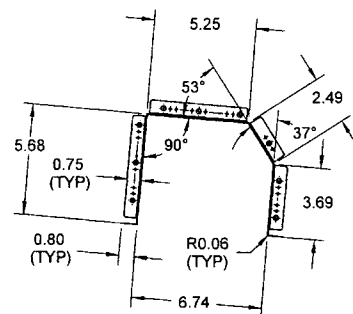
02/11/01/10

B	PAGE 3: MS20427M3 WAS MS20427M-3	RF	08.01.07
A	NEW ISSUE	RF	07.11.07
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	IE	DRAWING NO.	REV. B
MFG. APPR.	AS	D3649	SHEET 1 OF 3
APPROVED	AS	TITLE	SCALE
DE APPR.	AS	BOTTOM PANEL ASSEMBLY	1:5
DATE	08.01.07	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

RELEASED
28.03.24



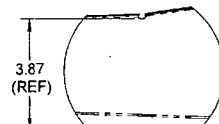
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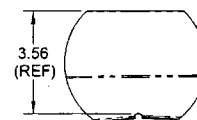
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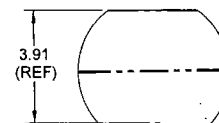
DETAIL E



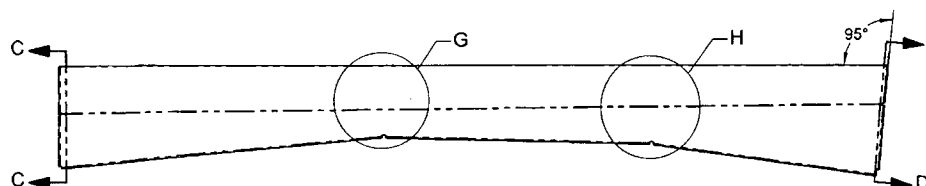
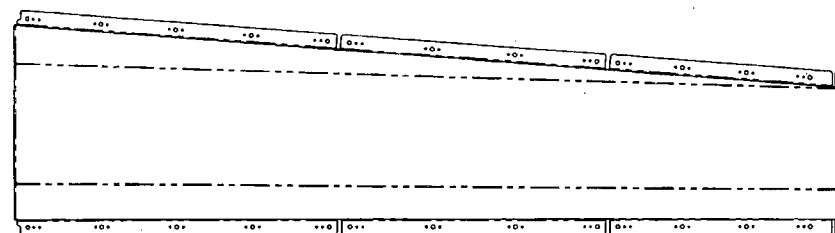
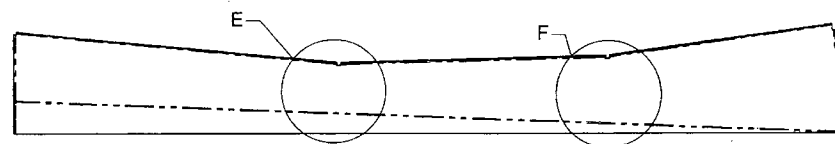
DETAIL F



DETAIL G



DETAIL H



D3649-1 TUNNEL BOTTOM PANEL
(MAKE FROM D3649-1F)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 65209

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D3649	SHEET 2 OF 3
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	BOTTOM PANEL ASSEMBLY	
DATE	08.01.07	COPYRIGHT © 2007 BY DART AEROSPACE LTD	
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RELEASED
08-07-27/14

